



## DESC IRP Stakeholder Advisory Group Planning Meeting

April 5, 2023

### Meeting Participants

- **DESC**
  - Betty Best
  - Eric Bell
  - Andrew Walker
  - Jim Neely
  - John Raftery
  - Bradley Perricelli
  - Sheryl Shelton
  - Adam Bidwell
  - Amanda Prestage
  - Joseph Stricklin
  - Iris Griffin
  - Brian Ulmer
- **CRA**
  - Jeff Plewes
  - James Russell
  - Taylor Chapman
- **Advisory Group**
  - Anna Sommer
  - Anthony Sandonato
  - Ben Garriss
  - Earnest White
  - Eddy Moore
  - Emma Clancy
  - Evelyn Menendez
  - Findlay Salter
  - Forest Bradley Wright
  - Jake Duncan
  - Justin Somelofske
  - Kate Mixson
  - Omari Thompson
  - O'Neil Morgan
  - Phil Hayet
  - Ryan Deyoe
  - Scott Connuck



## Agenda

- I. Status Update & Stakeholder Feedback Received
  - DESC IRP Process & Schedule Update
  - Open Discussion on Stakeholder Advisory Group
- II. Select Topics from Stakeholder Feedback
  - Coal Plant Retirement Coordination
  - Shared CC Gas Resource
  - 2022 & 2023 TIAs
  - High CO2 Forecast
  - Integration Costs
- III. Plans for Session XII and Next Steps



## Meeting Minutes

### Welcome and Introductions

Mr. James Russell from CRA opened the meeting and introduced the agenda for Session XI. The agenda focused on setting expectations for the 2023 stakeholder process, including discussing what feedback stakeholders have on how to improve the process and selecting priority topics of discussion for future sessions now that the 2023 IPR is in litigation. The agenda also included select topics of discussion informed from stakeholder feedback.

### Status Update & Stakeholder Discussion

#### Status Update on DESC IRP Process & Schedule

Mr. Russell emphasized the goal for this session was to define priorities and methodology for collaborating with the DESC IRP Stakeholder Advisory Group in 2023. He then walked through the DESC IRP schedule for the next year up to March 2024. He noted that the 2023 IRP was filed on January 30, 2023 and that the 2023 IRP procedural schedule will be ongoing in April through August until PSC releases a decision on or before November 22, 2023. Last, Mr. Russell highlighted that the 2024 IRP Update will be filed March 31, 2024.

Mr. Russell also stated that the Stakeholder Advisory Group (SAG) will prioritize topics during its 2023 sessions for consideration in future IRPs as matters related to previous IRPs will be covered under the 2023 IRP procedural schedule. Mr. Russell further noted the importance of continued engagement with stakeholders to ensure timely discussion on important matters related to the 2024 IRP Update.

#### Open Discussion on Stakeholder Advisory Group

Mr. Russell framed three key questions designed to solicit feedback from stakeholders on the stakeholder process and their expectations for the 2023 year. Following each question, Mr. Russell opened up discussion for stakeholders to voice their thoughts and questions.

##### 1. Continuing Productive SAG Process During 2023 IRP Litigation

First, Mr. Russell asked participants their opinions on whether DESC and stakeholders can continue a constructive Stakeholder Advisory Group with the 2023 IRP in litigation. Mr. Russell indicated that the SAG process this year is notably different since the 2023 IRP is in litigation, but that DESC does not expect this to be a barrier to productive conversation leading up to the 2024 IRP Update. Mr. Russell asked stakeholders for confirmation whether they feel the same.

Anna Sommer indicated that as a stakeholder, she does not see litigation as a roadblock to dialogue and a constructive process, but that she does see issues with her perceived continued dismissal and misrepresentation of stakeholder comments. Ms. Sommer also stated that she is looking for changes from DESC that demonstrate good faith in the process, including better integrating stakeholder feedback



into their work. Mr. Russell echoed Ms. Sommer's sentiments, highlighting that the intent of the meeting is to set expectations for the stakeholder process and to discuss ways to create a more productive forum for discussion.

Mr. Eddy Moore questioned whether there are any priority topics DESC is interested in speaking about to stakeholders. Mr. Moore emphasized that it is important that topics addressed in the SAG need to be ones that both parties have interest.

Ms. Sommer spoke again and stated that not only are the topics being addressed important, but also how the process works itself. She suggested it may be helpful to establish rules of engagement for the SAG process. She also noted that as a stakeholder, she feels frustrated in that she believes DESC is misrepresenting the stakeholder process in part because DESC treats testimony as speaking on behalf of stakeholders.

Mr. Ryan Deyoe stated a major disconnect in the stakeholder process is how stakeholder feedback is incorporated into DESC's work. He shared that when a stakeholder asks for specific tests or analysis, he feels that these requests and suggestions are usually not fully integrated or prioritized in DESC's modeling. Mr. Russell responded noting that there won't always be a direct line from stakeholders to DESC to which Mr. Deyoe responded that these are exploratory analyses and so he would like to understand why some studies are or are not considered during exploration. Mr. Russell responded stating that this can be a topic for improvement, but that any discussion on specific analysis related to the 2023 IRP won't be discussed in the stakeholder process this year as it is being litigated in the 2023 IRP process.

Anthony Sandonato communicated that ORS's ultimate position will be put forward in the commission proceedings and wanted to ensure that ORS's participation in the SAG process won't be misconstrued as agreement.

Mr. Russell concluded the discussion with a confirmation of general consensus that the SAG can continue with the 2023 IRP in litigation.

## 2. SAG Process Strengths and Weaknesses

The second question Mr. Russell framed to stakeholders was what is and what is not working well in the Stakeholder Advisory Group.

Mr. Russell called attention to areas DESC believes is working well in the process: engaging on topics outlined in the PSC Order 2020-832 and Order 2021-429; keeping stakeholders informed on methodology, inputs, and assumptions to IRPs; sharing of PLEXOS inputs and models; and creating a forum for stakeholders to engage with DESC through meetings and homework questions. Mr. Russell outlined areas of improvement informed by stakeholder homework responses and internal DESC team discussions: timeliness of inputs and results; timeliness of feedback from stakeholders for session development; providing opportunities for stakeholder input, for example Session VIIIA lead by Ms. Sommer on DSM modeling techniques; meetings focused on priority topics that incorporate stakeholder



input; and finding alternative means to engage with stakeholders. Mr. Russell then deferred to stakeholders for further discussion.

Mr. Moore questioned how the Session VIIIA DSM modeling meeting informed DESC's activities following the presentation. Mr. Moore stated that from his perspective as a stakeholder, DESC came prepared to the meeting with a follow up presentation to show what Ms. Sommer was suggesting on DSM modeling was not possible and so he felt DESC did not fully consider her suggestions. Ms. Betty Best stated DESC's goal at that time was to determine how to technically model DSM as a resource for compliance with Commission order and looked to the stakeholder group for advice on process and best practices on the topic. DESC felt that Ms. Sommer provided good information, but DESC did not glean sufficient information on the technical implementation. With this being a commission order requirement, DESC engaged Guidehouse consultants to understand how other utilities treated DSM in their integrated resource modeling. Ms. Best stated that if stakeholders have further suggestions on how to model DSM as a selectable resource, DESC would be open to future meetings. Ms. Sommer entered in the chat and mentioned verbally that she has stated before that she would be happy to have additional discussion with DESC and would be interested in continuing that discussion.

Mr. Russell circled the conversation back and asked stakeholders for feedback on what is working well.

Ms. Sommer highlighted while getting both inputs and outputs is the most useful, inputs are the most important to her as a stakeholder, especially when these inputs are in the modeling format and provided before DESC has finished modeling. This allows her the opportunity to react to inputs and supply feedback.

Ms. Sommer also asked for clarification on when Mr. Russell and CRA speak on behalf of DESC. Mr. Russell responded that CRA's role is to moderate and assist in implementing the SAG, and that there are areas, such as the Coal Plants Retirement Study, that CRA has been engaged to lead. CRA intends to speak directly on analysis and modeling that CRA has completed for DESC and on specific topics that DESC and CRA have collaborated. These topics will be made clear to stakeholders. Mr. Russell further emphasized that CRA does not directly speak on behalf of DESC as CRA is functioning as a facilitator in the SAG process.

Ms. Sommer circled back to provide insight on what is and isn't working well in the stakeholder process. For what is working well, she stated that she finds the complexity of the information provided by DESC on priority topics is presented well and at a digestible level. She also shared that she is glad to have the opportunity to have two-way dialogue and to provide input. For what is not working well, Ms. Sommer stated that she feels not all stakeholder feedback is not incorporated into DESC's work and that she is worried about the misrepresentation of stakeholder feedback and testimony.

Ms. Best asked stakeholders if they feel DESC has done well addressing priority topics. Ms. Sommer responded by sharing that she did not feel that there were any missed priority topics but is more concerned that there is a disconnect between what is talked about and what feedback is implemented. She stated that she would like to move past repeating conversations and look towards how DESC and stakeholders can productively move the process forward. Ms. Sommer also stated that it would be best



for DESC to provide insight on topics they would believe to be useful to discuss, especially any changes or developments DESC is internally considering.

Mr. Forest Wright indicated that he appreciates the opportunity to speak in meetings and that he disliked being channeled exclusively into the chat for dialogue. Mr. Wright shared that it is important for DESC to have a presence in the meeting, citing that it feels more like a productive conversation when DESC provides input and engages directly with stakeholders during meetings. Ms. Best responded by saying that capturing questions and comments in the chat helps memorialize the discussion as all presentations and minutes are provided to the Commission semi-annually via Commission order. She agreed that having a two-way dialogue is important.

Mr. Wright also questioned to what extent stakeholder feedback is integrated into DESC's final product and that he gauges how useful and productive the SAG is by that metric. He shared he would like more information on how DESC considers stakeholder comments and how they ultimately decide what to implement.

Mr. Moore questioned if DESC views the SAG process as an avenue to find consensus on issues with stakeholders, or if DESC is less interested in consensus and views the SAG as a chance to only listen to feedback. Ms. Best addressed this question by stating that the commission intended for the stakeholder process to facilitate discussion so that less issues are litigated. She believes the SAG process has shaped the IRP process, that there is opportunity for consensus on certain topics, and that there can be further meaningful dialogue.

### 3. SAG 2023 Priority Topic

Mr. Russell stated that there are two remaining sessions in 2023 and so he would like to select priority topics for discussion for these future sessions. Mr. Russell turned to stakeholders for suggestions on priority topics.

Mr. Deyoe expressed interest in the EV load growth forecasts and modeling, including transmission planning around EV growth, charging infrastructure and deferred charging, and EV management plans. Mr. Russell asked if EV charging is something that can be modeled, and Mr. Deyoe indicated that PLEXOS has the ability to optimize EV charging and that there are a few methodologies for modeling that can be discussed. Ms. Best inquired if Mr. Deyoe would be able to lead a workshop on this type of modeling as DESC finds the topic meaningful to understand. Mr. Deyoe stated he will confer with his party's senior members on whether they can lead a workshop. Jim Neely questioned if this is an IRP issue or an issue outside the scope of the IRP that is focused more on developing EV load management programs. Mr. Deyoe responded that it is potentially an IRP issue since EV could be incorporated as a separate component of load within the model, not just embedded in the forecast.



Ms. Sommer highlighted gas supply and generation planning in light of gas supply constraints as a priority topic. She indicated she would like to know more on how DESC's efforts to address supply constraints may influence generation planning.

Ms. Sommer also indicated an interest in discussing how to implement PSC's IRP order to model 2% energy efficiency savings. Ms. Best commented that the 2% EE savings is most likely going to be litigated in the 2023 IRP. ICF recently completed DESC's 2023 Market Potential Study that was filed as part of the 2023 IRP. This study did not indicate a cost effective and achievable solution to achieve 2% savings. Ms. Best shared that this topic is better to be discussed after reviewing the Commission's order on the 2023 IRP.

Ms. Sommer also indicated an interest in discussing factors causing peak winter load.

Mr. Wright suggested discussing treating energy efficiency as a selectable resource in portfolio development, with further conversation on how to design, model, and implement. Ms. Best stated DESC would be interested in understanding how other utilities specifically model EE as a selectable resource and to ensure that no double counting is occurring with a reduction in the load forecast. She shared DESC is open to suggestions from stakeholders on how to advance the model. Ms. Sommer expressed that she would be willing to provide input on the modeling.

Mr. Deyoe further suggested discussing the ability to use AMI data to study cold weather trends in peak load. He expressed this is most likely a long-term issue as it depends on AMI roll-out in DESC territory.

Mr. Deyoe stated a conversation on how to incorporate differential credits from the IRA (such energy community credits) in total cost calculations. Ms. Best stated DESC is waiting on more guidance from the US Treasury, which will influence how DESC ultimately models the credits. Mr. Deyoe asked if grants DESC receives from IRA/IIJA would be a topic that is discussed in the stakeholder IRP process. Ms. Best agreed that would be an ongoing topic that can be discussed.

As a group, stakeholders selected the following priority topics for discussion at the next three sessions:

- Session XII
  - 2022 TIA
  - IRA Modeling & IIJA Implications
  - Gas Supply Planning
- Session XIII
  - Peak Winter Load Modeling
  - EV Load Growth and Management – i.e. deferred/scheduled charging
- Session XIV
  - Process and Methodology Changes for 2024 IRP Update

Mr. Russell described that for each topic, DESC will provide background on their current approach, assumptions, methods, considerations, etc. and stakeholders will have the opportunity to provide input via homework and other ad hoc touchpoints.





## Select Topics from Stakeholder Feedback

### Coal Plant Retirement Coordination

Mr. Andrew Walker presented the coal plant retirement coordination plan. He stated there have been no updates to the schedule published in the Coal Plants Retirement Study. The coordination plan represents the necessary steps leading towards the development of a shared resource, which is still in preliminary discussions with Santee Cooper. Mr. Walker highlighted the coal retirement plan is midway through the South Carolina regulatory process, which included the retirement study, 2023 IRP, Request for Proposal (RFP) and SC Siting Act Process. Overall, the process is still in the preliminary stages.

### Shared CC Gas Resource

Ms. Best stated that DESC has entered into preliminary discussions with Santee Cooper on the details of a shared resource. She stated that a shared resource aligns with both DESC and Santee Cooper future capacity needs as both utilities seek paths to coal retirements, and that it will provide economic development in the region. Currently, the pipelines in the low country area are fully subscribed so DESC has entered into preliminary discussions with shippers on how to address that issue with potential pipeline expansions. The short-term plan is to focus on completing the Urquhart and Wateree RFPs to inform decision making on the shared resource.

Mr. Eric Bell explained the change from a CT to a CC shared resource. Mr. Bell explained that the PLEXOS model itself selected a CC gas plant over CT gas plant candidates. CC gas plant had a build cost that is comparable to a CT gas plant, but it is much more efficient which made it a more attractive candidate resource to the PLEXOS model.

See answered questions in Appendix 1: Questions 1 to 2.

### 2022 & 2023 TIAs

Mr. Bell presented background on the topic, stating that the 2022 TIA looked at two sets of cases for Wateree and Williams retirements and replacements. He shared that the results of the 2022 TIA are available and will be posted. The report will have the full details on the contingencies and cost estimates for the upgrades. Ms. Best added this will be a priority topic for next time and that Mr. Scott Parker could walk through the results with the SAG if stakeholders indicate interest in the homework questions.

For the 2023 TIA, Mr. Bell stated that DESC has amended the 2023 TIA to focus the scope and reduce the number of studies necessary to retrieve results. In conversations with Santee Cooper, DESC has focused on two cases – a CC plant of a capacity of 1300 MW and 1800 MW – both at the Canady's Site. The TIA will provide the delivery split.

See answered questions in Appendix 1: Questions 3 to 11.

### High CO2 Forecast





Mr. Neely presented the 2022 IRP CO2 emission forecasts, which includes Zero, Medium, and High emission cases. The Medium case is based on the IHS forecast. The High forecast is 50% higher than the IHS forecast and starts two years earlier (2028) and grows at 8% per year. Mr. Neely discussed that there is an understanding that a CO2 tax could be pushed out until the effects of the IRA roll off, and so asked stakeholders if they have insight on the most appropriate way to model CO2 costs given that a tax has been pushed.

Stakeholders responded stating that many air emissions today are regulated and that the EPA is proposing new regulations on emissions standards, so while it is unlikely there will be a carbon price, further air emissions regulations will have a cost to ratepayers that will need to be captured in the CO2 models.

Ms. Sommer indicated that the general preference tends to be to model specific emissions reduction as using a CO2 price may not actually influence emission reductions beyond those at coal retirements in the model.

### Integration Costs

Mr. Neely presented information on how DESC models integration costs for intermittent resources, particularly solar and wind. Mr. Neely stated the primary way DESC models integration costs is by increasing the contingency reserves and regulation reserves needed in order to include the new resources. Reserves are increased as additional generation is added. DESC engaged Guidehouse to conduct a new variable integration cost study that was filed with the avoided cost application, which DESC will be reviewing to determine if the reserve levels DESC is modeling in PLEXOS are appropriate. Mr. Neely stated the average of additional reserves identified in the variable integration cost study was 52%, and it varied by season and hour. He also shared that DESC has only conducted an integration study on solar and have not looked at an integration study for offshore wind yet.

In response, Ms. Sommer provided commentary on how Duke Energy approaches integration cost modeling, citing they include integration costs in their capacity expansion cases but not in production cost modeling. Mr. Bell shared that DESC models the additional costs in PLEXOS in the LT and ST, but that DESC will do a review of and comparison against what Duke has published.

Mr. Neely explained that spinning reserves are added the same whether it is utility or a PPA. He noted that DESC adds \$1.80/MWh on top of any PPA costs. DESC has been discussing internally whether this approach is appropriate.

See answered questions in Appendix 1: Questions 12.



## Next Steps

### Plans for Session XII

Mr. Russell reviewed the priority topics selected earlier in the meeting and stated that IRA Modeling and Gas Supply Planning will be discussed at the next session. He also stated that DESC and CRA will ask for feedback from stakeholders on the 2022 TIA results. Session XII is targeted for the beginning of Q3 2023.

Mr. Russell concluded the meeting by thanking the Stakeholder Advisory Group for their time and reiterating that additional questions can be submitted through the Stakeholder website or emailed to [DESC-IRP-Group@crai.com](mailto:DESC-IRP-Group@crai.com).



**Appendix Table 1: Session XI Q&A**

	Question / Comment	From	Topic	Answer
1	What part of the state would experience the economic development from the shared resource?	Eddy Moore	Shared CC Gas Resource	In particular but not limited to the South Carolina low country
2	Where will the gas transmission upgrades occur?	Eddy Moore	Shared CC Gas Resource	Expansion on CGT, Transco and Southern Natural are being explored most likely from Port Wentworth to Canadys along with upstream.
3	Will the 2023 TIA have the Urquhart replacements modeled?	Ryan Deyoe	2022 & 2023 TIA	The 2023 TIA baseline assumption is that Wateree Replacements are a 262 MW large frame combustion turbine ("Frame CT") at the DESC Urquhart site and 100 MW of standalone energy storage at the Wateree site, similar to what is in the 2023 IRP retirement review cases.
4	Stakeholders previously requested to see an all-battery replacement for Wateree.	Anna Sommer	2022 & 2023 TIA	All-battery replacement is in Case 1 of the 2022 TIA.
5	It was pointed out to me that I misspoke and should have said battery replacement at Williams. All the cases in the 2022 TIA studying Williams retirement were combined with CTs at varying sites. Stakeholders	Anna Sommer	2022 & 2023 TIA	Please see the recently provided results of the 2022 TIA Study and Sierra Club Data Request 1-6 in Docket 2022-9-E.



	previously requested to see an all-battery replacement for Williams (600 MW of storage)			
6	What is the difference between the 2023 TIA and the March Transmission Planning Request?	Anna Sommer	2022 & 2023 TIA	The Amended 2023 TIA and the March Transmission Planning request are not related. The most recent Transmission Planning Request is related to a Resource Solicitation Cluster ("RSC") for the Urquhart RFP. Selections have been made, and now selections need to be studied through the interconnection study process.
7	Since DESC is looking to add capacity at the Urquhart site per the March TIA request and DESC is studying pending upgrades needed from the RFP, how do these two processes interact? How does DESC isolate the upgrades that are needed?	Anna Sommer	2022 & 2023 TIA	2022 TIA Case 2 assumed that the existing resources at Urquhart remained. At the time of the 2022 TIA request, DESC did not have the results of the RFP process for Urquhart and so this assumption was made.
8	In the 2023 TIA, how is DESC treating the Bushy Park replacements?	Anna Sommer	2022 & 2023 TIA	One replacement CT (50MW) will be represented in the 2023 TIA
9	To clarify where the All-source Procurement is, when DESC says it is going into definitive interconnection study process, is that the new generator replacement interconnection study process?	Findlay Salter	2022 & 2023 TIA	Only the MW Incremental to the existing interconnection will be submitted for study in the RSC.
10	What is the timing for the cluster study?	Findlay Salter	2022 & 2023 TIA	The request has been submitted for the resource solicitation cluster study. We are unable to comment on further timeline.
11	One thing we've asked for before is an understanding from the TIA of the transmission limitations into the Charleston load pocket and the extent to which gen located in the load	Anna Sommer	2022 & 2023 TIA	By way of explanation, Charleston is not a traditional load pocket (loads at the end of a single line) but has a line/load configuration that is very limiting in



	pocket can alleviate those constraints. That would help inform whether much smaller solar projects, DR, etc. might have value in that area.			operations and in contingency analysis. In general, power generation in peak demand periods helps, but solar does not contribute or alleviate problems when the winter peak demand contingency analysis identifies the limiting contingencies.
12	When proposing more solar or battery, is the increased amount of spinning reserves automated in optimization or is it hardwired?	Phil Hayet	Integration Costs	Spinning reserves are added hourly based on how much intermittent reserves are online. As more intermittent resources are added, every hour the solar is generating will require additional reserves from other resources on the system.